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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention relates to the cosmetics which blend the coffee tree seed extracts which contain chlorogenic acid as an essential ingredient. As the field of the invention, can use as drugs and quasi drugs, or various constituents for cosmetics of a cosmetic field (various pharmaceutical preparation used for a person and other animals), and specifically, The application to a lotion, a milky lotion, cream (ointment is included), oil, a pack, soap (medicated soap is also included), body soap, baths, a shampoo, rinse, a tonic, a hair spray, etc. is raised.

[0002]

[Description of the Prior Art]If the skin and the hair cover a living body's surface, are protecting the living body from various factors, such as inferior environment, for example, ultraviolet rays, bacteria, and dust, and he is put in another way, the skin and the hair were continuously exposed to those environmental factors, and they have got damaged.

[0003]Therefore, research of the cosmetics etc. which protect the skin and the hair from the environmental factor for which it has an adverse effect out of in the living body and to which reproduction of the skin and the hair which got damaged is urged is done more in ancient times. In recent years, it does not remain in the purpose from a healthy side, but the research against the background of the psychology where he would like to be always beautifully aiming at cosmetics is also made briskly.

[0004]Although drugs aiming at the removal and elimination of a factor which has an adverse effect out of in the living body, quasi drugs, and cosmetics are marketed over various sorts now, peroxy lipid generation depressant action, an ultraviolet absorption operation, melanin generation depressant action, etc. are known in these effects and operations.

[0005]For example, peroxy lipid generation depressant action is an operation which prevents

the lipid (oil) which exists in a living body oxidizing. The peroxy lipid made by oxidation of lipid does an obstacle to a cell membrane function in the living body, or causes inactivation of various enzymes, the denaturation of protein, etc., and has an adverse effect on a body tissue. These are also considered to be connected to illnesses, such as aging and cancerous change, and importance is attached to controlling the hyperoxidation of this lipid on medicine in recent years.

[0006]Sunlight ultraviolet rays also have the harmful operations with them called aging of a sunburn, a suntan, and the skin, and inducement of skin cancer on the other hand although it had usefulness by health and a sanitary aspect, such as composition of vitamin D, sterilization, a sterilization action, for human being.

[0007]Even if it tells ultraviolet rays to a mouthful, by the difference in a biological operation A UV-C field of 290 nm or less, Are divided into 3 of a 290-320 nm UV-B field and a 320-400-nm UV-A field fields, and although operations on a living thing are strong carcinogenic high ultraviolet rays, a UV-C field, Since almost is absorbed by the ozone layer in the stratosphere, it is supposed that it will not reach on the ground, but reduction in an ozone layer becomes a problem in recent years, and we are anxious about the increase in skin cancer. Although aging of a sunburn (acute inflammation), a suntan (pigmentation), and the skin, generating of skin cancer, etc. are urged also to the ultraviolet rays of UV-B and area A, when ultraviolet rays are irradiated by the skin, a horny layer and epidermis are penetrated, erythema appears in about 3 to 6 hours, and UV-B reaches a peak in 24 hours. And although erythema will shift to melanism gradually in four to 15 days, since the inflammatory reaction by UV-B is activated and melanocyte is based on the increase in the amount of melanin generation, this happens. Cornification will progress in the epidermal tissue which received damage, and the surface deterioration accompanying reduction of a horny layer moisture content will be started.

[0008]Although it is supposed that it reaches to a dermic layer, melanism is caused instantly, and UV-A is disappeared for a short time, this is considered because existing melanin oxidizes and it becomes black temporarily. Instead of producing the melanism of retardancy and there being no appearance of erythema, when exposed continuously, activation of melanocyte is remarkable and photographic density also becomes strong. Since skin permeability is high, damage to a dermis organization is intense and it is also required to defend these ultraviolet rays (a UV-B field, a UV-A field) that lose the elasticity of the skin, produce deep wrinkles, cause the result that a color will also assume blackish brown, and are received from the outside of a living body.

[0009]Although the enzyme in connection with various oxidation and reduction exists in the living body, Although tyrosinase enzyme is raised as one of the causes of skin melanism into it, for example and some metabolic machineries are considered from the relation with change (phenomenon) of the coloring matter which ** and vegetation have, When the tyrosinase

enzyme in melanocyte is activated to one of them, tyrosine oxidizes, and change into a dopa quinone and it oxidizes further -- dopa -- it becomes chromium and 5,6-dihydroxyindole, this polymerizes, and generating black melanin eventually is known. Therefore, the substance which prevents the melanism with the unusual skin based on such a biochemical mechanism is called for. The substance which checks activation of the tyrosinase which participates in generation of a melanin similarly is also called for.

[0010]On the other hand, about chlorogenic acid, it is said that it isolated more industrially for the first time than raw coffee beans, and it is known as the bean type that there are more chlorogenic acid contents of the lobster kind than an ARABIKA kind. Illustration of the vegetation which chlorogenic acid exists in vegetation widely in addition to this, is contained in the fruits of many dicotyledonous plants and a leaf, and contains chlorogenic acid knows a tobacco leaf, a pear leaf, apple pulp, a sweet potato, a mulberry, tea, etc.

[0011]A report of the application to the industrial field of chlorogenic acid recently comes to be performed, and as a publication, 1: JP,57-83250,A (as a manufacturing method of a candy, chlorogenic acid into the candy material which uses sugar and a starch syrup as a principal member) [add and] browning-izing of a candy -- prevention and 2:JP,57-115147,A (the foodstuffs and the drink containing sugars -- chlorogenic acid.) in addition, browning-izing add a substance and according to caramelization of sugars -- prevention and 3:JP,57-117566,A (the same -- a paprika pigment -- chlorogenic acid.) Add a substance and temporal fading of a paprika pigment In addition, prevention, 4:JP,58-138347,A (edible natural antioxidant substance of a raw-coffee-beans zymolysis extract), 5: JP,60-192555,A (antiallergic food which becomes considering chlorogenic acid etc. as an essential ingredient), 6: JP,62-111671,A (food-grade natural anti-acid of a raw-coffee-beans hot water extract), 7: Patent Publication Showa 63-502349(at time of administration before administration of food and drink, or drugs, chlorogenic acid which isolated is prescribed for the patient, and stomach membrane is protected against advance of ulcer)8: -- JP,02-100600,A (foodstuffs -- a mulberry -- adding - green tea extract solution) [which damage the membrane of the stomach or the duodenum or promote gastric-acid secretion] By saving these foodstuffs at low temperature after a package with the wrapping paper which has far-infrared radiation and an ethylene adsorbing action, Prolonged freshness keeping and the prevention from browning of a food surface, 9: JP,04-27374,A (to ingesta vitamin C, such as chlorogenic acid, etc.) [contain and] Processing of food and drinks, reduction of the fragrance flavor during preservation, change, and generating of the different clever nasty smell are reported to control, 10:JP,04-283501,A (freshner of a cut flower), 11:JP,06-9603,A (stabilization process of vitamin C), etc.

[0012]

[Problem(s) to be Solved by the Invention]As use of chlorogenic acid was shown above, an operation and an effect are also acquired for most by taking orally for the purpose of

prevention of browning[fading /]-izing of ingesta, control of a different clever nasty smell and protection of the membrane of the stomach or the duodenum, and stabilization of vitamin C. On the other hand, what was used effectively is not found in the cosmetics field. Then, this invention persons tried new [of the coffee tree seed extracts which high-contain chlorogenic acid / original], the examination about useful use and its operation, and pursuit, and have advanced research wholeheartedly.

[0013]

[A means for an invention to be solved] Namely, this invention persons from many chlorogenic acid being contained in the seed of a coffee tree in view of the above-mentioned situation. The chlorogenic acid content extract produced by extracting from the seed of a coffee tree was examined, and it checked having the above-mentioned peroxy lipid generation depressant action, an ultraviolet absorption operation, and melanin generation depressant action, and discovered that applying to cosmetics was dramatically effective, and this invention was completed. The progress which results in this invention is explained below.

[0014]The coffee trees of this invention are the tropical Africa district of coffee tree group Rubiaceae, and a mainly Ethiopia native evergreen shrub, by a long ovoid, a little, the anniversary bloom is carried out and a leaf grows gregariously in an axil of leaf with coriaceous and a peduncle with a short flower. Tubed and a tip are divided into several pieces by the base, and a corolla is fragrant in a white color. a globular form with small fruits thru/or an ellipse form -- the start -- green -- as it ripens -- red -- it becomes purple and two seeds are usually included. This seed has one trench in an even field by the shape of semi-spherical, it is called a flat bean, and fruits are harvested and imported in after-bloom eight to nine months. Although what is obtained from the seed of a coffee tree (*Coffee arabica* L.) is used in this invention, In addition, it is also possible to use the seed of the lobster coffee tree (*Coffee canephora* Pierr.) of congener or the Liberia coffee tree (*Coffee liberica* Bull.).

[0015]Raw may dry these in the state [raw / these] and an organic solvent, water or hot water, an organic solvent or a mixed solvent with water, and the thing with which organic solvent extraction and water extraction were combined further may be used for the extraction from the seed of a coffee tree as a solvent after grinding. As an organic solvent, methanol, ethanol, n-butanol, acetone, chloroform, ethyl acetate, n-hexane, a 1,3-butylene glycol, propylene glycol, etc. are used.

[0016]Although there is in particular nothing to which an extraction condition is restricted, ordinary temperature and heating extraction are usually preferred. after extraction filters and dries [concentration] -- solution form -- **** is also good as paste state or powdered. In many cases, it can use in the state as it is, but as long as it is necessary, purification treatment, such as deodorization and decolorization, may be added in the range which does not have influence in the effect. What is necessary is for what is necessary to be just to use activated carbon

columns etc., and to choose arbitrarily the usual means generally applied by the quality of an extract, and just to perform it as purification treatment means, such as deodorization and decolorization.

[0017]Although the chlorogenic acid used as the essential ingredient by this invention means Monod, dicaffeoylquinic acid (Caffeoylquinic acid), and its mixture, 3-, 4- and 5-caffeoylquinic acid, or its mixture is preferred. The form of a salt or ester may be sufficient as chlorogenic acid at free acid or the form of the derivative which can be received physiologically, and details, and potassium salt (potassium caffeine etc.) is suitable especially.

[0018]the coffee tree seed extracts which contain the chlorogenic acid of this invention as an essential ingredient -- the present state -- even when -- although it can use, the amount of formulas in the case of being blended as cosmetics changes a little with the kind of cosmetics, the quality of the extract to be used, and grades of the operation expected. Usually, it is good 3 to 10% of preferably 0.05 to 30% of the weight (it expresses with weight % hereafter). If there are few loadings than 0.05%, even if an effect will not be enough and will blend exceeding 30%, only the effect of balancing the quantity is not expectable.

[0019]To the cosmetics which blended the coffee tree seed extracts which contain the chlorogenic acid of this invention as an essential ingredient. The various ingredients generally used to cosmetics, drugs, quasi drugs, etc. within limits which do not spoil the effect of this invention, for example, oil (animal and vegetable oils, straight mineral oil, ester oil, a wax oil, and silicone oil.) surface-active agents (anionic.), such as higher alcohol, phospholipid, and fatty acid cationicity, both sexes or a nonionic surfactant, and vitamins (a vitamin A group.) Vitamin B group, folic acid, nicotinic acid, pantothenic acid, and biotin. A vitamin-C group, a vitamin D group, a vitamin-E group, other ferulic acid, **-oryzanol, etc., an ultraviolet ray absorbent (p-aminobenzoic acid, anthranil, salicylic acid, and a coumarin.) Benzotriazol, tetrazole, imidazoline, pyrimidine, dioxane, A franc, a pyrone, camphor, nucleic acid, allantoin, and those derivatives, An amino acid system compound, a shikoinin, a by Chinese quince, a BAIKA lane, berberine, etc., Anti-oxidant (stearic acid ester, NORUJIHIDOROGUASE retene acid, dibutylhydroxytoluene, burylhydroxyanisole, p-hydroxyanisole, propyl gallate, sesamol, sesamol) thickeners (hydroxy ethyl cellulose and ethyl cellulose.), such as gossypol Carboxyethyl cellulose, methyl cellulose, carboxymethyl cellulose, Carboxymethylcellulose sodium, hydroxy propylcellulose, A nitrocellulose, polyvinyl alcohol, polyvinyl methyl ether, A polyvinyl pyrrolidone, polyvinyl methacrylate, polyacrylate, A carboxyvinyl polymer, gum arabic, tragacanth gum, agar, Casein, dextrin, gelatin, pectin, starch, alginic acid, its salt, etc., a moisturizer (propylene glycol, a 1,3-butylene glycol, and a polyethylene glycol.) Glycerin, chondroitin sulfate and its salt, hyaluronic acid, and its salt, Again sodium lactate etc. In addition, lower alcohol, polyhydric alcohol, A water soluble polymer, a pH adjuster, preservation from decay and a ** motorcycle agent, a coloring agent,

perfume, a pick-me-up, A stabilizing agent, ** and a plant extract, ** and vegetable albumen and its decomposition product, ** and a plant polysaccharide and its decomposition product, ** and vegetable glycoprotein and its decomposition product, a microbial cultivation metabolic turnover ingredient, a blood-flow accelerator, an antiphlogistic, an anti-inflammatory agent, an antiallergic agent, a cell activator, amino acid and its salt, a keratolytic drug, an astringent. It can also blend, use together and use with a wound treating agent, a foam increasing agent, the agent for the mouths, and deodorization and a deodorant.

[0020]About the pharmaceutical form of the cosmetics which blended the coffee tree seed extracts which contain the chlorogenic acid of this invention as an essential ingredient. It is arbitrary, and can blend with a conventional method, for example, can be considered as the gestalt of face toilet, cream, ointment, a lotion, a milky lotion, a pack, oil, soap (medicated soap is also included), a facial wash, perfume, cologne, baths, a shampoo, rinse, a tonic, a hair spray, etc. In addition, it is available also as a constituent for the mouths by stomatitis etc. again to nonwoven fabrics, such as an oral medicine agent of various gestalten and also sanitary napkins, and wet tissue.

[0021]furthermore -- the gestalt of cosmetics is arbitrary -- solution form, creamy, paste state, gel, gel form, a bubble, and a solid state -- or it can use as powdered.

[0022]Although the example of manufacture (example of extraction) is indicated to below and stated to it in more detail, the method shown by the following is used in check tests, such as the below-mentioned operation, and is not limited to this.

[0023]Example 1 of extraction : (extraction by a 1,3-butylene glycol)

Pulverize 20 g of seeds (raw beans) of a coffee tree, and 60%1,3-butylene-glycol solution (1 kg) is added, After carrying out stirring extraction at 75 ** for 3 hours, filtering, performing solid liquid separation after cooling, dipping the separated extract in the column filled up with 250 ml of cation exchange resin and adsorbing caffeine, decompression hardening by drying of the eluate is carried out, and about 2.5 g is obtained for the coffee tree seed extracts of this invention. Next, took 0.5 g, and add 20%1,3-butylene-glycol solution, it was made to dissolve, and the coffee tree seed extract was 100 ml.

[0024]Example 2 of extraction : (extraction by ethanol)

20 g of seeds (raw beans) of the coffee tree were ground, the ethanol solution (1 kg) was added 60%, stirring extraction was carried out at 75 ** for 3 hours, after cooling, it filtered, solid liquid separation was performed, vacuum concentration of the separated extract was carried out, and about 40 ml was obtained for the coffee tree seed extract after ethanol removal.

[0025]Example 3 of extraction : (extraction by hot water)

20 g of seeds (raw beans) of the coffee tree were ground, water (1 kg) was added, stirring extraction was carried out at 75 ** for 3 hours, after cooling, it filtered, solid liquid separation was performed, vacuum concentration of the separated extract was carried out, and about 40

ml was obtained for the coffee tree seed extract.

[0026]

[Example]Although working example etc. are indicated to below and stated to it in more detail, the method shown by the following is used in check tests, such as the below-mentioned operation, and is not limited to this.

[0027]Working example 1: The chlorogenic acid content of the examples 1-3 of extraction which made the preparation the liquid which dissolved the fixed-quantity chlorogenic acid (made in Jansen) powder of chlorogenic acid in the ethanol solution, and were acquired above was measured with high performance chromatography (made by Shimadzu). The test result was shown below.

Example 1 of extraction : (extract by a 1,3-butylene glycol)

Chlorogenic-acid content: Example 2 of 3.8% extraction : (extract by ethanol)

Chlorogenic-acid content: Example 3 of 2.6% extraction : (extract by hot water)

Chlorogenic-acid content: 2.4% [0028]Working example 2: Based on the peroxy lipid

generation depressant action examination TBA method (analytical one, biochemistry cult Vol.95, p.351-358, 1979), the peroxide formation depressant action of linolenic acid was considered, and it measured with the following test methods.

[0029]0.1% of linolenic acid is added to a 0.8% of "test-method" lauryl sodium sulfate aqueous solution, it dissolves in it, and 3.9 ml of this solution is taken into a 10-ml transparent glass screw bottle. After adding 0.1 ml of sample solutions to this and irradiating with ultraviolet rays (Toshiba make: arrange in parallel a floor line-20SE lamp and a floor line-20SBL lamp three lights, respectively, and it glares in the distance of 15 cm) for 1 hour, 1 ml of this liquid is taken, 1 ml and 4.5% dibutylhydroxytoluene 20microl are added, and the mixture of 0.67% thiobarbituric acid solution and a 15% acetic acid solution (pH 3.5) is heated at 95 °C for 1 hour. After cooling, it centrifuges, after being easy to add 4 ml of methanol:n-butanol (15:85) and shaking it. Next, the absorbance at 534 nm of this n-butanol layer was measured, and it was considered as the amount of peroxy lipid. Apply the amount of peroxy lipid at the time of adding a sample and irradiating with ultraviolet rays for a and a sample, and the amount of peroxy lipid when not irradiating with ultraviolet rays b, instead of [of a sample] -- an extracting solvent (a 1,3-butylene glycol or ethanol.) The amount of peroxy lipid when applying the amount of peroxy lipid at the time of adding purified water and irradiating with ultraviolet rays for an extracting solvent (a 1,3-butylene glycol or ethanol, purified water) instead of a' and a sample, and not irradiating with ultraviolet rays was made into b', and it asked for the peroxy lipid generation control rate by several 1.

As an "adjustment of sample" sample, the liquid made to dissolve 1 g of comparative example 1:alpha-tocopherol (made by Kishida Chemical) in 100 ml of ethanol solutions was used as contrast using the examples 1-3 of extraction shown above.

[0030]

[Equation 1]

$$\text{抑制率 (\%)} = \left[1 - \frac{a - b}{a' - b'} \right] \times 100$$

[0031]

[Table 1]

過酸化脂質生成抑制作用試験				
検 体	抽出例 1 (7-7-760% BG抽出液)	抽出例 2 (7-7-760% ET抽出液)	抽出例 3 (7-7-760% 水抽出液)	比較例 1 (α -トコフェール 溶解液)
濃度/抑制率				
30.0	88.8%	98.1%	95.6%	95.3%
10.0	89.6%	98.6%	93.2%	93.3%
5.0	94.4%	95.5%	91.3%	90.2%
1.0	86.6%	90.6%	85.6%	70.9%
0.1	60.9%	52.9%	50.2%	66.7%
0.05	34.8%	22.7%	24.7%	20.5%

[0032]The coffee tree seed extracts in which a "test-result" result contains the chlorogenic acid of this invention as an essential ingredient as shown in Table 1 were a little stronger than the tocopherol solution of the comparative example 1, or have checked that almost equivalent peroxylid generation depressant action was shown.

[0033]Working example 3: Using the ultraviolet absorption operation examination "test method" spectrophotometer (1 cm layer length: quartz cell), the absorbance of ultraviolet rays was measured with spectrophotometry and it was considered as the ultraviolet absorption operation. The sample used p aminobenzoic acid (PABA) of the concentration as contrast using example of extraction 1-2 ** of working example 2.

[0034]

[Drawing 1]

[0035]As a "test-result" result was shown in drawing 1, the coffee tree seed extracts which contain the chlorogenic acid of this invention as an essential ingredient have checked absorbing an ultraviolet wavelength (280-350 nm) in dominance compared with p aminobenzoic acid.

[0036]Working example 4 : 0.2 ml is mixed for 1.0 ml of tyrosinase activity inhibitory action examination "test method" tyrosin solutions (0.3mg/ml of L-tyrosine), 2.0 ml of macle BAIN buffer solution (pH 6.5), and a sample solution, In a 37 °C thermostat, after neglecting it for

about 10 minutes and adding 0.1 ml of tyrosinase solutions (mushroom origin, 2500 unit/ml) to this, measure the absorbance of 475 nm (A) and after that this reaction mixture in a 37 °C thermostat. The absorbance of 475 nm is measured in a similar manner after neglect for 20 minutes (A'). moreover -- as simultaneously blank -- instead of [of a sample] -- an extracting solvent (a 1,3-butylene glycol or ethanol, purified water) -- in addition, the same operation -- an absorbance -- measurement (a) -- it carried out (a') and asked for the tyrosinase activity inhibition rate by several 2. The sample used the examples 1-3 of extraction and the contrast: comparative example 1 of working example 1.

[0037]

[Equation 2]

$$\text{阻害率 (\%)} = \left[\frac{(a' - a) - (A' - A)}{a' - a} \right] \times 100$$

[0038]

[Table 2]

チロシナーゼ活性阻害作用試験				
検体	抽出例1 (エーテル60% EG抽出液)	抽出例2 (エーテル60% ET抽出液)	抽出例3 (エーテル熱 水抽出液)	比較例1 (α -トコフェール 溶液)
濃度/抑制率				
30.0	95.3%	93.2%	94.6%	—
10.0	98.5%	91.2%	95.2%	93.5%
5.0	90.8%	82.7%	80.3%	86.2%
1.0	77.3%	62.5%	60.8%	75.8%
0.1	43.8%	49.5%	38.2%	28.3%
0.05	24.8%	32.7%	20.7%	—

[0039]The coffee tree seed extracts in which a "test-result" result contains the chlorogenic acid of this invention as an essential ingredient as shown in Table 2 have checked having strong tyrosinase activity inhibitory action compared with the tocopherol solution of the comparative example 1. [0040]Working example 5: With reference to the method (Journal of the Society of Cosmetic Chemists 26 (1), 8, 1992) of melanin generation depressant action examination "test method" ** and others [1], continuous irradiation of the ultraviolet rays (Toshiba make: ultraviolet-rays food line20-SE lamp) was carried out to the C57BL mouse (8W**) for three days 15.2mJ/cm² and one day [one]. From the last exposure day, the ear pinna was extracted one week afterward and the skin of the external ear was immersed in the 2N-sodium bromide solution after removing a cartilage. Then, epidermis was exfoliated from ****, this

epidermis was immersed in the L-DOPA solution (0.1M phosphate buffer solution, pH 7.2) 0.1%, and dopa dyeing was performed. In a dopa solution, a sample (examples 1-3 of extraction) is added so that it may become each concentration shown in Table 3, It carried out by having added 20% 1,3-butylene-glycol solution similarly as contrast, the judgment evaluated the number of melanocytes of the aliquot (5mm^2) by the microscope with the cell number of Measurement Division and per 1mm^2 , and the result was shown in Table 3.

[0041]

[Table 3]

メラニン生成抑制作用試験				
対 照	換 体	抽出例1 (コヒー/360% BG抽出液)	抽出例2 (コヒー/360% ET抽出液)	抽出例3 (コヒー/熱水 抽出液)
メラノサイト数↓	濃度/メラノサイト数			
20%1,3-BG 水溶液 111.0±18.1	30.0%	認めず	認めず	2.3±1.3
	10.0%	10.1±5.4	12.0±4.8	11.0±7.8
	6.6%	15.7±6.8	22.4±9.7	30.5±8.7
	3.3%	42.8±8.4	72.0±10.8	52.0±10.8
	1.0%	75.1±9.4	82.0±10.5	72.0±10.8
	0.05%	83.6±9.9	95.0±12.8	102.0±14.8

[0042]The seed extracts of a coffee tree in which a "test-result" result contains the chlorogenic acid of this invention as an essential ingredient as shown in Table 3, the melanocyte of the epidermis of the colored mouse ear pinna activated by ultraviolet rays -- dopa -- when liquid dyed specifically, reduction of the melanocyte (melanin generation cell) number was observed in dominance. Therefore, it has checked having melanin generation depressant action.

[0043]Working example 6 : 50 test-for-tensile-strength "test-method and valuation method" unsettled human hair, After being warm water and making 50 unsettled human hair permeate a rinse sink and a sample solution for 10 minutes, it irradiates with air-drying and ultraviolet rays (Toshiba make: arrange in parallel a floor line-20SE lamp and a floor line-20SBL lamp three lights, respectively, and glare in the distance of 15 cm) well for 1 hour, and finally is warm water -- a rinse sink -- it dried for 10 minutes and tensile strength was measured. In measurement, it pulled at a time one unsettled human hair which arranged a length of about 10 cm the speed for 2-cm/, and carried out by the method of searching for the load at the time of a fracture. Using the examples 1-3 of extraction and the comparative example 1 of working example 1, the sample used tensilon meter (made in Oriental Baldwin), and evaluated measurement of tensile strength by the condition:temperature of 20 **, and 60% of humidity. The numerical value in front expressed average value, and showed the result in Table 4.

[0044]

[Table 4]

換 体	破断荷重(g)
未処理人毛	115.0
抽出例1 (T-7-1/100%BG抽出液)添加処理人毛	140.7
抽出例2 (T-7-1/100%ET抽出液)添加処理人毛	137.5
抽出例3 (T-7-1/熱水抽出液)添加処理人毛	138.6
比較例1 (α -トコフェロール溶解液)添加処理人毛	120.0

[0045]The human hair in which addition processing of the coffee tree seed extracts in which a "test-result" result contains the chlorogenic acid of this invention as an essential ingredient as shown in Table 4 was carried out, Compared with comparative example 1 (α -tocopherol solution) addition processing human hair, the good result which shows a numerical value with high breaking load, and has a protective action which controls the fall of the tensile strength of the hair by ultraviolet rays was obtained.

[0046]Working example 7: Durability "test-method and valuation method" human hair of the moisture maintenance effect (4 g in weight.) 5g of hair rinse shown in the following table 5 was applied to 10 cm in length, it is warm water, and a rinse sink and after being air-dry for 10 minutes, it saved under fixed humidity, the water content of immediately after and 3 hours after was measured, and the durability of the effect was evaluated in quest of the rate of change. The valuation method was performed by three-stage evaluation of following A-C, and showed the result in Table 5.

Evaluation A: Less than 50% of a rate of change.

Evaluation B: Not less than 50% of a rate of change, less than 70%.

Evaluation C: Not less than 70% of a rate of change.

[0047]Working example 8: Feel organoleptics (sex as [Smoothness - gently] admiration and a comb)

40 "test-method and valuation method" female panelists are divided into the 4th divisions of each ten-person division of every, Pass 5g of hair rinse of this invention article shown in the following table 5, and a comparison article, and its hair is shampooed with a commercial shampoo, actually direct on the hair, after improving a rinse style with warm water -- it is warm water, after applying each hair rinse and making it permeate well -- a rinse sink and the smoothness after being air-dry -- organic-functions evaluation was gently added about the sex as admiration and a comb. The valuation method was performed by the following three-stage evaluation of 1-3, measured ten persons' average value, and showed the result in Table 5.

Evaluation 3: Good.

Evaluation 2 : usually.

Evaluation 1: It is bad.

[0048]Working example 9: Feel organoleptics (gloss of hair)

40 "test-method and valuation method" female panelists are divided into the 4th divisions of each ten-person division of every, actually direct on the hair, after passing 5g of hair rinse of this invention article shown in the following table 5, and a comparison article, shampooing one's hair with a commercial shampoo and improving a rinse style with warm water -- after applying each hair rinse and making it permeate well, it is warm water and organic-functions evaluation was added about the gloss of a rinse sink and the hair after being air-dry. The valuation method was performed by the following three-stage evaluation of 1-3, measured ten persons' average value, and showed the result in Table 5.

Evaluation 3: It is glossy.

Evaluation 2: It is a little glossy.

Evaluation 1: It is dim.

[0049]preparing the hair rinse which consists of a combination presentation of the "test-result" table 5 -- the durability of the moisture maintenance effect of hair, and the smoothness of hair - the gloss of a sex and hair was gently evaluated with the comparison article as admiration and a comb. a result -- like Table 5 -- this invention article 1-3 -- tensile strength, the durability of moisture maintenance of hair, and the smoothness of hair -- gently -- an admiration and comb passage -- gloss -- the synthetically good result was obtained compared with both comparison articles.

[0050]

[Table 5]

ヘアリンス	本 発 明 品 1	本 発 明 品 2	本 発 明 品 3	比 較 品 1
原 料 名 : 配合量(重量%)				
(1)塩化ジメチルアミンメチルモニウム	3.0	3.0	3.0	3.0
(2)セノール	1.5	1.5	1.5	1.5
(3)自己乳化型トリスアミン酸グリセリン	3.0	3.0	3.0	3.0
(4)カカオ	1.0	1.0	1.0	1.0
(5)シリコン油	0.2	0.2	0.2	0.2
(6)1,3-ブチレングリコール	5.0	5.0	5.0	5.0
(7)抽出例1(コヒーチ60%抽出液)	5.0	—	—	—
(8)抽出例2(コヒーチ60%抽出液)	—	5.0	—	—
(9)抽出例3(コヒーチ熱水抽出液)	—	—	5.0	—
(10)比較例1(α-トコフェール溶解液)	—	—	—	5.0
(11)精製水	81.3	81.3	81.3	81.3
(12)香料	適量	適量	適量	適量
「製法」 油層部(1)から(5)を85℃で加温溶解し、別に水層部(6)から(11)も同様に85℃で加温溶解する。次に、油層部を攪拌しながら、水層部に徐々に添加し、60℃で攪拌、均一混和後、冷却し、50℃で香料を加え、自然冷却する。				
水分保持効果の持続性	A	A	A	B
滑らかさ	2.8	2.8	2.6	1.9
しっとり感	2.7	2.6	2.5	1.4
くし通り性	2.7	2.8	2.5	1.4
毛髪のつや	2.7	2.7	2.6	1.5

[0051]Working example 10 : The 40 use effect examination "test-method and valuation method" adult-men-and-women panelists are divided into the 4th divisions of each ten-person division of every, 30g of sun screen latex of this invention article shown in the following table 6 and the comparison article was passed, before going out, optimum dose was always taken in the hand every day, and I had you apply to a face, and the continuous use effect examination was carried out over one month. He sweats, and when its face was washed, I had optimum dose taken and applied each time. The valuation method was performed on the following standard.

"Skin aging preventive effect"

Effective: The beam of skin and gloss have been improved.

a little -- effective: -- the beam of skin and gloss have been improved a little.

Nothing Effect: With a use front and no change.

"Surface deterioration improvement effect"

Effective: The umbrella of skin and roughness have been improved.

a little -- effective: -- the umbrella of skin and roughness have been improved a little.

Invalidity: With a use front and no change.

"Beige improvement effect"

Effective: The color of skin has been improved white.

a little -- effective: -- the color of skin has been improved white a little.

Invalidity: With a use front and no change.

The numerical value in Table 7 expressed the number, and showed the result in Table 7.

[0052]

[Table 6]

サンスクリーン乳液	本 発 明 品 1	本 発 明 品 2	本 発 明 品 3	比 較 品 1
原 料 名 : 配合量(重量%)				
(1)スアリン酸	2.0	2.0	2.0	2.0
(2)自己乳化型スアリン酸グリセリン	1.0	1.0	1.0	1.0
(3)セタノール	2.0	2.0	2.0	2.0
(4)流動パラフィン	12.0	12.0	12.0	12.0
(5)トリステアリン酸	1.0	1.0	1.0	1.0
(6)1,3-ブチレンジオール	5.0	5.0	5.0	5.0
(7)抽出例1(コセー#80%EG抽出液)	7.0	—	—	—
(8)抽出例2(コセー#80%ET抽出液)	—	7.0	—	—
(9)抽出例3(コセー#熱水抽出液)	—	—	7.0	—
(10)比較例1(α -トコフェロール溶解液)	—	—	—	7.0
(11)精製水	70.0	70.0	70.0	70.0
(12)香料	適量	適量	適量	適量

「製法」
油層部(1)から(5)を80℃で加温溶解し、別に水層部(6)から(11)も同様に70℃で加温溶解する。次に、油層部を攪拌しながら、水層部に徐々に添加し、60℃で攪拌、均一混和し、40℃で香料を加え、自然冷却する。

[0053]The "test-result" result has checked that this invention article 1-3 was [in which the prevention from skin aging, surface deterioration, and flesh color are improved, and an improvement and a good result are synthetically obtained compared with a comparison article] effective, as shown in Table 7.

[0054]

[Table 7]

検 体	皮膚老化防止効果			肌荒れ改善効果			肌色改善効果		
	有 効	やや有効	無 効	有 効	やや有効	無 効	有 効	やや有効	無 効
本発明品1	7	3	0	7	2	1	9	1	0
本発明品2	7	3	0	6	3	1	8	2	0
本発明品3	9	3	1	8	2	0	8	1	1
比較品1	1	3	6	0	3	7	2	3	5

[0055]Working example 11: The coffee tree seed extracts (examples 1-3 of extraction) which contain safety test [primary skin irritation test] chlorogenic acid as an essential ingredient were stuck on the skin of the rabbit (one group of three animals, the weight of around 3,800g) which depilated regions of back. The judgment performed erythema and an edema as an index by the marks method of primary-stimulus nature in after-pasting 24 and 48 or 72 hours. As a result, in all the animals, in any way, erythema and an edema were not accepted but it was judged with negativity.

[Skin accumulation stimulativeness examination] similarly, Per 0.5 ml / animal was applied to the skin of the Hartley system guinea pig (feminity, one group of five animals, the weight of around 320g) which depilated the regio lateralis for the coffee tree seed extracts (examples 1-3 of extraction) which contain chlorogenic acid as an essential ingredient ($2 \times 4 \text{ cm}^2$) once per day, and 5 times per week. Spreading performed the depilation over four weeks on the last spreading day of each week. The judgment performed erythema and an edema as an index by the marks method of primary-stimulus nature on the day following the final day of each week. As a result, in all the animals, erythema and an edema were not accepted at all over the 1-4th week after spreading, but it was judged with negativity.

[Acute toxicity test] Before examining what distilled the solvent thoroughly similarly under decompression of the coffee tree seed extracts (examples 1-3 of extraction) which contain chlorogenic acid as an essential ingredient, The amount internal use of 2,000 mg/kg was carried out at the ddy system mouse (one group of five animals, the weight of 30g) made to abstain from food for 4 hours, and progression to a toxic symptom, a grade, etc. were observed temporally. As a result, in no mice, abnormalities were accepted at all for 14 days, and the result of dissection was also normal. LD_{50} was judged to be 2,000 or more mg/kg.

[0056]Although working example is shown below and the utilizing method of this invention is explained further in full detail, this invention is not specified as the following working example, can be contained and blended and can be used for various kinds of cosmetics, drugs, quasi drugs, etc. What was manufactured with the conventional method in manufacture of each product may be sufficient as each working example, and it showed only loadings.

[0057]

Working example 11: Cold cream Pile Quantity % . 1. White beeswax 11.0 2. liquid paraffin . 22.03. Lanolin 10.0 4. oil-of-almonds 15.0 5. borax 0.5 6. coffee tree seed extract (1,3-butylene-glycol extract) 3.0 7. antiseptic ** Quantity 8. perfume ** The emainder set to quantity 9. purified water 100[0058]

Working example 12: Cream Pile Quantity % 1. squalane . 20.0 2. yellow-bees-wax 5.0 3. refining jojoba oil . 5.0 4. glycerol monostearate . 2.0 5. polyoxyethylene (20) sorbitan monostearate 2.0 6. glycerin 5.0 7. coffee tree seed extract (30% ethanol extract) 5.0 8. antiseptic ** Quantity 9. ***** The emainder set to quantity 10. purified water 100[0059]

Working example 13: Lotion Pile Quantity % 1. sorbitol . 2.0 2. 1,3-butylene-glycol . 2.0 3. polyethylene glycol 1000. 1.0 4. polyoxyethylene oleylother (25E.O.) 2.0 5. ethanol 10.0 6. coffee tree seed extract (40% propylene glycol extract) 5.0 7. perfume ** The emainder set to quantity 8. purified water 100[0060]

Working example 14: Cream foundation Heavy . Quantity % 1. stearic acid 4.0 2. glyceryl monostearate 3.0 3. cetanol 1 and 5 4. myristic acid isopropyl 7.0 5. liquid paraffin 10.0 6. white beeswax 3.0 8. kaolin . 3.0 9. talc 1.0 10. coffee tree seed extract . 4.0 (Ethanol: 1,3-butylene-glycol =1:1 extract) 11. color pigment 1.0 12. triethanolamine 3.0 13. glycerin 3.0 14. bentonite 1.0 15. antiseptic ** Quantity . 16. Perfume ** The emainder set to quantity 17. purified water 100 [0061]

Working example 15: Shampoo Pile Quantity %1. lauryl sulfate triethanolamine 5.0% 2. polyoxyethylene-lauryl-ether sodium sulfate 12.0 3. 1,3-butylene-glycol 4.0 4. lauric acid diethanolamide . 2.0 5. disodium-edetate 0.1 6. coffee tree seed extract (water extract) -- 4.0 7. antiseptic ** Quantity 8. perfume ** The emainder set to quantity 9. purified water 100[0062]

Working example 16: Hair liquid Pile Quantity % 1. ethanol . 25.0% 2. polyoxypropylene butyl ether phosphoric acid . 12.0 3. polyoxypropylene monobutyl ether 5.0 4. triethanolamine RUAMIDO 2.0 5. disodium-edetate 0.1 6. coffee tree seed extract (30% acetone extract) 4.0 7.***** . Quantity 8. perfume ** The emainder set to quantity 9. purified water 100[0063]

Working example 17: Tonic Pile Quantity % 1. ethanol . 35.0% 2. ethyl oleate 2.0 3. polyoxyethylene (40) hydrogenated-castor-oil 2.0 4. coffee tree seed extract (ethanol extract) -- 5.0 5. perfume ** The emainder set to quantity 6. purified water 100[0064]

Working example 18: Baths Pile Quantity % 1. sodium bicarbonate 60.0 2. anhydrous-sodium-sulfate 32.0 3. borax 3.0 End of dried powder 6.0 of 4. coffee tree seed extract (1,3-butylene glycol: ethanol : water = 1:1:1 extracs)[0065]

[Effect of the Invention]The coffee tree seed extracts which contain the chlorogenic acid of this invention as an essential ingredient have peroxy lipid generation depressant action, an ultraviolet absorption operation, and melanin generation depressant action.

Therefore, if it contains and uses for cosmetics, whitening, the prevention from skin aging, and a hair protective effect are expectable.

As the field of the invention, they are mentioned by drugs and quasi drugs, or the various constituents for cosmetics of a cosmetic field (various pharmaceutical preparation used for a person and other animals), and specifically, It is application to a lotion, a milky lotion, cream (ointment is included), oil, a pack, soap (medicated soap is also included), body soap, baths, a shampoo, rinse, a tonic, a hair spray, etc.

[Translation done.]